

REMARKS

Claims 1-48 are presented for reconsideration in the light of the following remarks and authorities.

1. It is said that Applicant's election of species 7 in paper number 9 is acknowledged and that because Applicant is said to have not distinctly and specifically pointed out the supposed errors in the restriction requirement, the election has been treated as an election without traverse. This position is not understood. In the office action dated January 15, 2003, the Examiner said, "Upon the allowance of a generic claim, applicant will be entitled to a consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141." In our response, we said, "Application owner elects species 7 shown in FIGS. 2b and 3c and claims 1-48 readable thereon should no generic claim eventually be held to be allowable."

2. Claims 9-13, 21-23, 35, 37-39 and 43-48 are said to be withdrawn from further consideration pursuant to 37 C.F.R. 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was said to be made without traverse in paper number 9. No such election without traverse was made. We elected claims 1-48 for further prosecution in this application as readable on species 7 shown in FIGS. 2b and 3c, and the Examiner has failed to show that these claims do not read on that species. Accordingly, withdrawal of the withdrawal of claims 9-13, 21-23, 35, 37-39 and 43-48 from further consideration is respectfully requested. If this position is maintained, the Examiner is respectfully requested to identify at least one element in each of these claims not found in the species of FIGS. 2b and 3c.

3, 4. Claims 1-8, 14-20, 24-34, 36 and 40-42 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The claims are said to contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and/or use the invention. The present invention is said to be a device as shown in FIG. 1 for broad interpretation for processing a single channel input to generate a five-channel output shown in

elected FIG. 2b and combining the five-channel output to produce a three-channel output in selected FIG. 3c. Signal path 22c in FIG. 3c is said to be a center channel having a spectral pattern representing the speech. However, FIG. 2b as said to be explained by the specification as originally filed is said to fail to show how to obtain signal path 22c having a spectral pattern representing the speech. Signal path 22c is said to be a product of the input signal M multiplied by factor  $\alpha$  and another factor 1.414. This product is said to have a spectral pattern of audio frequency in the original input signal. Applying the signal path 22c as said to be shown in FIG. 2b to the input of signal path 22c in FIG. 3c it is said would not produce the invention as intended. The intended invention is said to provide the signal within the speech spectral to the center channel and the rest of the signal is said to be delayed and then generated by other channels. Therefore, it is said the specification as originally filed fails to provide an enabled description to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This ground of rejection is respectfully traversed.

The specification, on page 6 at line 5 defines the factor  $\alpha$  as  $\frac{|C|}{|C| + |\bar{C}|}$  where  $|C|$  is the time averaged magnitude of the speech signal on line 18 and  $|\bar{C}|$  is the time averaged magnitude

of the complement of the speech signal.  $|C|$  and  $|\bar{C}|$  may be measured at the speech tap 26 and the nonspeech tap 28, respectively. FIG. 2b shows speech tap 26 as coupled to the output of the speech filter 80 and shows the nonspeech tap as coupled to the output of summer 82, which subtractively combines the output of the speech filter 80 and the input signal. If the input signal  $M$  is predominantly in the speech band, then the value of  $|C|$  approaches zero, the value of  $|\bar{C}|$  approaches zero, and the value of  $\alpha$  approaches 1. If, as proposed by the office action, the signal on the signal path 22c has the spectral pattern of the audio frequency of the original input signal, which is predominantly in the speech band, then the signal on the signal path 22c has a spectral pattern generally characteristic of speech, as recited in claim 1. If the input signal  $M$  is predominantly outside the speech band, then the value of  $|C|$  approaches zero, the value of  $|\bar{C}|$

approaches 1, and the value of  $\alpha$  approaches zero. In this instance, there would be little or no signal on signal path 22c. Therefore, if a person skilled in the art were to construct and operate the circuit of FIG. 2b, the intended result of separating a single channel audio signal into a first separated signal characterized by a spectral pattern generally characteristic of speech of claim 1 would be achieved. Similarly, the circuit of FIG. 2b discloses a separator for separating an audio signal into a first separated signal characterized by a frequency spectrum characteristic of speech as recited in claim 14; the circuit of FIG. 2b discloses separating a single channel input into a speech audio signal and a nonspeech audio signal, as recited in claim 24; and the circuit of FIG. 2b discloses a method for separating a single channel audio signal into a first separated signal characterized by a spectral pattern generally characteristic of speech, as recited in claim 40.

Accordingly, withdrawal of the rejection of claims 1-8, 14-20, 24-34, 36 and 40-42 as failing to comply with the enablement requirement is respectfully requested.

5, 6. Claims 2-4, 17, 26-28, 31 and 40-42 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 is said to recite the limitation "the latter signals" in line 4, and it is said that it is unclear what these signals are. This lack of clarity is not understood. On line 3, reference is made to "a plurality of signals". Manifestly, the reference to one of the latter signals on line 4 necessarily refers to the plurality of signals recited on line 3.

Claim 3 is said to recite the limitation said factor is variable with respect to time. This is said to be incorrect because the delay time will not alter it as said to be disclosed in the specification as originally filed. Claim 31 is said to have a similar defect. The assertion that the recitation "said factor is variable with respect to time" is incorrect is an incorrect assertion. Neither claim 3 nor claim 31 recites that the delay time is variable with respect to time. In the circuit of FIG. 2b, both the signal output by summer 44 and the signal output by summer 40 are

multiplied by a factor  $\frac{|C|}{|C| + |\bar{C}|}$  (i.e.  $\alpha$ ), which is variable with respect to time.

Claim 17 is said to recite the limitation "said variable gain" in line 3 and there is said to be insufficient antecedent basis for this limitation in the claim. This objection is respectfully

traversed. "Said variable gain" spans lines 3 and 4 of claim 17, and there is antecedent support for this recitation at the beginning of line 3 reciting "wherein said first multiple signal paths are constructed and arranged to subtractively combine a signal to which variable gain has been applied".

Claim 26 is said to recite the limitation said circuit in lines 1 and 2, and it is unclear which circuit it is referring to. Claim 26 has been amended by inserting before "circuit" --second--.

Claim 40 is said to recite the limitation "said two decodable audio channel signals" in line 12, there is said to be insufficient antecedent basis for this limitation in the claim. Claim 40 has been amended by inserting before "decodable" on line 13 --second of said--.

Claim 42 is said to recite the limitation "said second and third decodable audio signals" in lines 2 and 3, and there is said to be insufficient antecedent basis for this limitation in the claim. With claim 40 amended, there is now sufficient antecedent basis for this limitation in the claim.

Accordingly, withdrawal of the rejection of claims 2-4, 17, 26-28, 31 and 41-42 as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is respectfully requested.

7, 8. Claims 1, 6, 8, 14, 18 and 20 stand rejected under 35 U.S.C. § 102(b) as anticipated by Shiraki. Regarding claims 1, 6, 8, 14, 18 and 20, the reference is said to disclose an audio signal processing apparatus for processing a single-channel audio signal to provide a plurality of audio channel signals, comprising a separator for separating the audio signal (after seven) into a first separated signal (to 11) and a second separated signal (to 12, 13), a first circuit (12, 13) and a processing step (by 11) to provide a first audio-channel signal. This ground of rejection is respectfully traversed.

"It is well settled that anticipation under 35 U.S.C. 102 requires the presence in a single reference of all of the elements of a claimed invention." *Ex parte Chopra*, 229 U.S.P.Q. 230, 231 (BPA&I 1985) and cases cited.

"Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

"This court has repeatedly stated that the defense of lack of novelty (i.e., 'anticipation') can only be established by a single prior art reference which discloses each and every element of the claimed invention." *Structural Rubber Prod. Co. v. Park Rubber Co.*, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984), citing five prior Federal Circuit decisions since 1983 including *Connell*.

In a later analogous case the Court of Appeals for the Federal Circuit again applied this rule in reversing a denial of a motion for judgment n.o.v. after a jury finding that claims were anticipated. *Jamesbury Corp. v. Litton Industrial Prod., Inc.*, 225 U.S.P.Q. 253 (Fed. Cir. 1985).

After quoting from *Connell*, "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim," 225 U.S.P.Q. at 256, the court observed that the patentee accomplished a constant tight contact in a ball valve by a lip on the seal or ring which interferes with the placement of the ball. The lip protruded into the area where the ball will be placed and was thus deflected after the ball was assembled into the valve. Because of this constant pressure, the patented valve was described as providing a particularly good seal when regulating a low pressure stream. The court quoted with approval from a 1967 Court of Claims decision adopting the opinion of then Commissioner and later Judge Donald E. Lane:

[T]he term "engaging the ball" recited in claims 7 and 8 means that the lip contacts the ball with sufficient force to provide a fluid tight seal. \*\*\* The Saunders flange or lip only sealingly engages the ball 1 on the upstream side when the fluid pressure forces the lip against the ball and never sealingly engages the ball on the downstream side because there is no fluid pressure there to force the lip against the ball. The Saunders sealing ring provides a compression type of seal which depends upon the ball pressing into the material of the ring. \*\*\* The seal of Saunders depends primarily on the contact between the ball and the body of the sealing ring, and the flange or lip sealingly contacts the ball on the upstream side when the fluid pressure increases. 225 U.S.P.Q. at 258.

Relying on *Jamesbury*, the ITC said, "Anticipation requires looking at a reference, and comparing the disclosure of the reference with the claims of the patent in suit. A claimed device is anticipated if a single prior art reference discloses all the elements of the claimed invention as arranged in the claim." *In re Certain Floppy Disk Drives and Components Thereof*, 227 U.S.P.Q. 982, 985 (U.S. ITC 1985).

The reference does not disclose a second separated signal to produce a remainder of a plurality of audio channel signals. The reference does not disclose the recited second separated signal called for by claim 1 and claims 6 and 8 dependent thereon. Nor does the reference disclose the second separated signal called for by claim 14 and claims 18 and 20 dependent thereon. Accordingly, withdrawal of the rejection of claims 1, 6, 8, 14, 18 and 20 as anticipated by the reference is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the reference regarded as corresponding to each element in each rejected claim.

9, 10. Claims 2 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the reference. Regarding claims 2 and 16, the reference is said to show an amplifier 17 or 18, but fails to explicitly show a multiplier. The amplifier as said to be taught by the reference, is said to mathematically perform multiplication of the input signal. The reference is said to teach an analog system having the amplifier and the speaker. However, it is said that one skilled in the art would have expected that a well known digital equivalent (a digital amplifier as a multiplier) would work equally well. Thus, it is said it would have been obvious to one of ordinary skill in the art to modify the primary reference system by using a well-known digital equivalent circuit for performing the amplification in order to generate the signal through a digital speaker with better performance. This ground of rejection is respectfully traversed.

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

"Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, '[t]he mere fact that the

prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.'" *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

And in *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000), the Court said:

[I]dentification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See id.* [Dembiczak]. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *See In re Dance*, 160 F.3d 1339, 1343, 48 U.S.P.Q.2d 1635, 1637 (Fed. Cir. 1998), *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. *See B. F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2d 1314, 1318 (Fed. Cir. 1996).

Nothing in the reference suggests the desirability of modifying what is there disclosed to meet the terms of claims 2 and 16. Claims 2 and 16 are dependent upon and include all the limitations of claims 1 and 14, respectively. We have shown above that the reference fails to disclose the second separated signal called for by these claims, and nothing in the reference suggests the desirability of modifying what is there disclosed to include this limitation. Accordingly, withdrawal of the rejection of claims 2 and 16 as unpatentable over the reference is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the reference regarded as corresponding to each element in claims 2 and 16, and quote verbatim the language in the reference regarded as suggesting the desirability of modifying what is there disclosed to meet the terms of claims 2 and 16.

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In view of the foregoing authorities, amendments, remarks and the inability of the prior art to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, and since all the claims read upon FIGS. 2b and 3c, all the claims are submitted to be in a condition for allowance, and notice thereof is respectfully requested. Should the Examiner believe the application is not in a condition for allowance, she is respectfully requested to telephone the undersigned attorney at (617) 521-7014 to discuss what steps she believes are necessary to place the application in a condition for allowance.

Enclosed is a \$110 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, Order No. 02103-347001.

Respectfully submitted,

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SEP -8 2003

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